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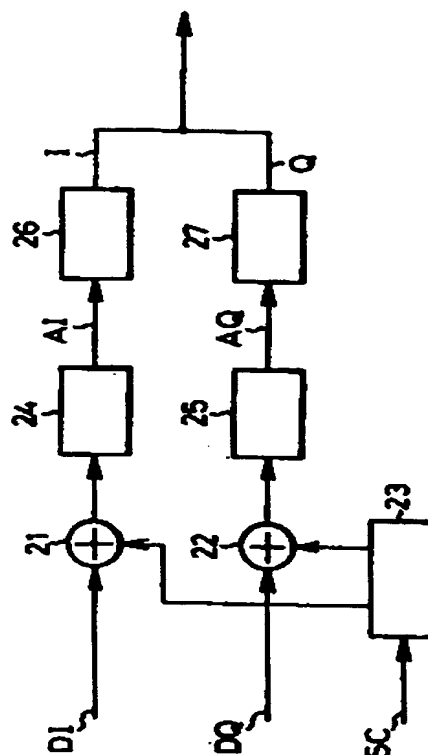
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TITLE : SYSTEM AND CIRCUIT FOR
INSERTING AUXILIARY SIGNAL IN
MULTI-VALUE ORTHOGONAL
AMPLITUDE MODULATION



ABSTRACT : PURPOSE: To reduce the frequency band width and the effect on transmission power by providing a signal point to transmit an auxiliary signal onto an orthogonal axis or its vicinity on a phase plane of a transmission signal.

CONSTITUTION: Digital signals DI, DQ to apply the amplitude modulation to orthogonal carrier signals I, Q are inputted to a D/A converter via adders 21, 22. The carrier signal is subject to orthogonal amplitude modulation and outputted. The auxiliary signal SC is inputted to a controller 23. The controller 23 outputs a signal to provide a signal point corresponding to the auxiliary signal SC to the adders 21, 22. The signal point is provided to a position taking a value other than the level point of a main signal on the orthogonal axis. Since the transmission power is the sum of square of the orthogonal axis components, the increase in the transmission power is prevented by providing a signal point taking the auxiliary signal near the orthogonal axis.

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